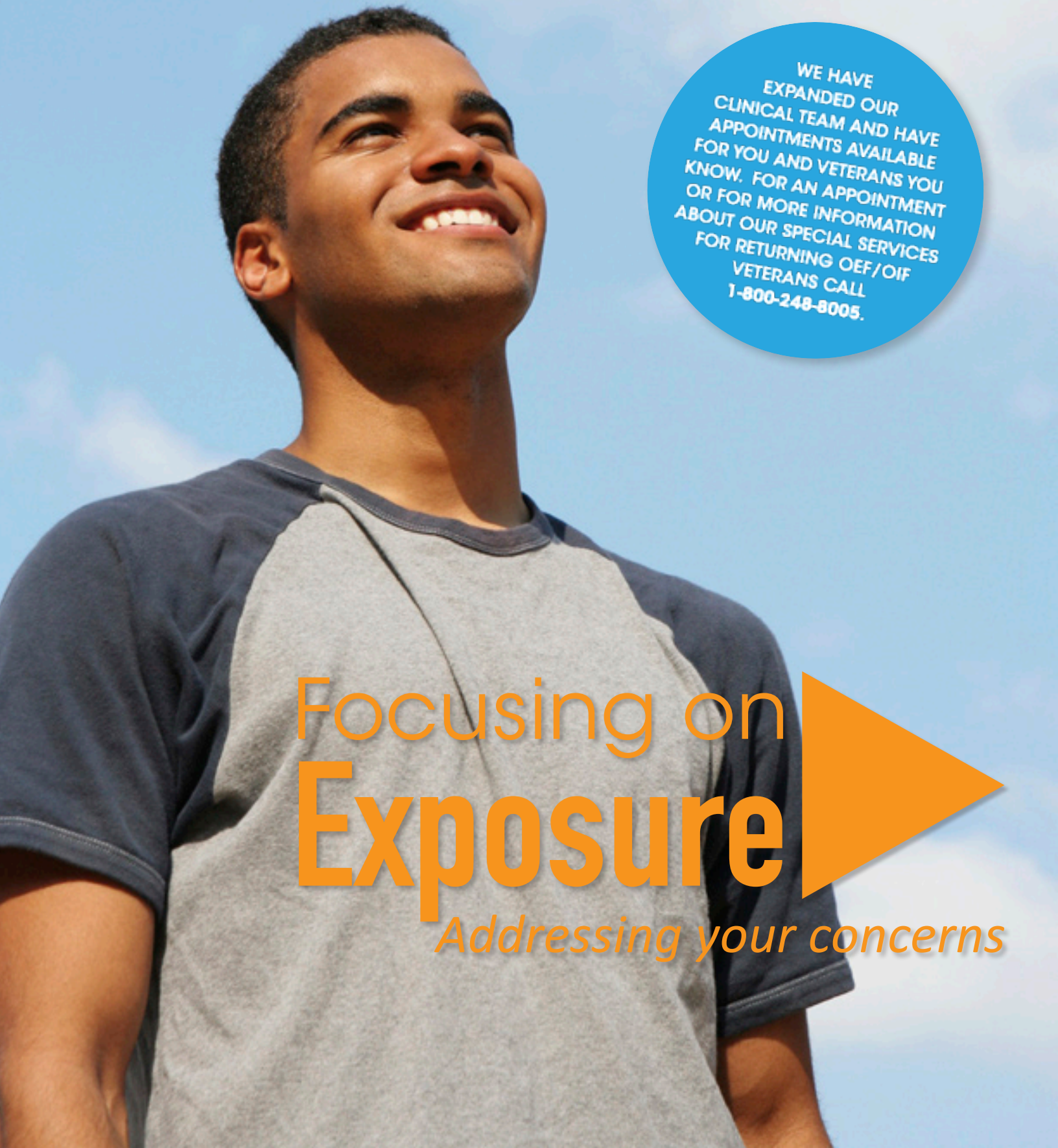
The New Jersey War Related Illness and Injury Study Center Newsletter

NJ WRIISC News

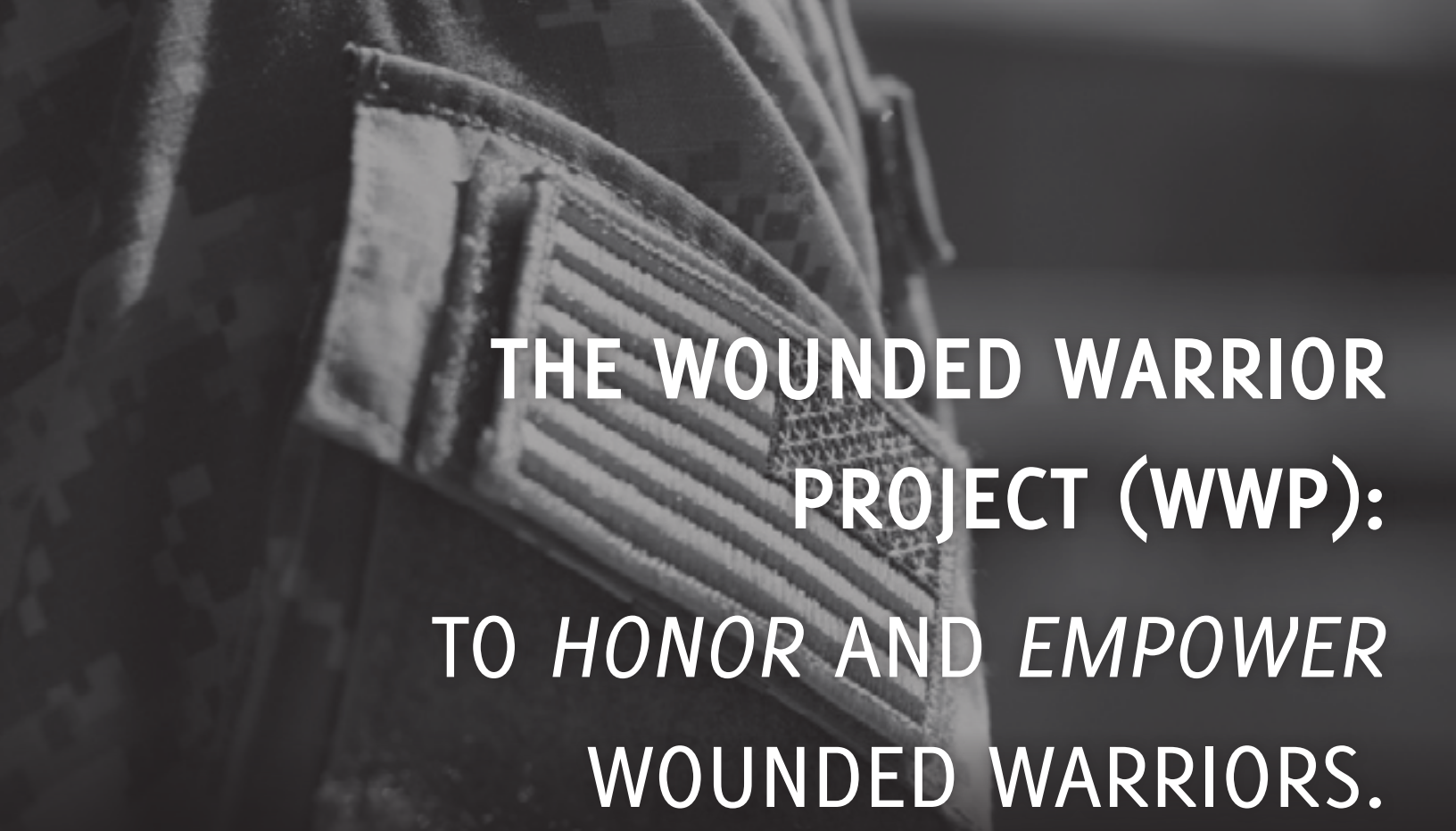
JANUARY 2009



WE HAVE EXPANDED OUR CLINICAL TEAM AND HAVE APPOINTMENTS AVAILABLE FOR YOU AND VETERANS YOU KNOW. FOR AN APPOINTMENT OR FOR MORE INFORMATION ABOUT OUR SPECIAL SERVICES FOR RETURNING OEF/OIF VETERANS CALL 1-800-248-8005.

Focusing on Exposure

Addressing your concerns



THE WOUNDED WARRIOR PROJECT (WWP): TO *HONOR* AND *EMPOWER* WOUNDED WARRIORS.

The WWP seeks to assist those men and women of our armed forces who have been severely injured during the conflicts in Iraq, Afghanistan, and other locations around the world.

WWP has three profound purposes:

- To raise awareness and enlist the public's aid for the needs of severely injured service men and women
- To help them aid and assist each other
- To provide unique, direct programs and services to meet their needs

One example of a specific service offered by the WWP is an initiative they call *Warriors to Work*. The Warriors to Work program helps individuals recovering from severe injuries received in the line of duty connect with the support and resources they need to build a career in the civilian workforce. Warriors to Work is a free service for the new generation of service men and women who have been injured in the line of duty.

For more information about the WWP and the services offered by this organization please visit the website at:

www.woundedwarriorproject.org

WOUNDED WARRIOR
PROJECT

Welcome to NJ WRIISC *News*

JANUARY 2009

As ***experts in post-deployment health***, veterans often ask us about possible health problems due to exposure to chemicals and other substances during their military service. In this edition of our newsletter we focus on three of the top exposures concerns for veterans recently returned from Iraq and Afghanistan. We also share additional important resources with you because your quality of life is important to us!

your road map to better health

Focusing On Exposure

Solid Waste Burning · Depleted Uranium · Dust, Sand and Other Airborne Particles

Veterans who have been deployed to war often have questions as to whether they may have been exposed to chemicals or substances that might negatively impact their health. WRIISC clinicians have expertise in deployment-related occupational and environmental exposures and how these exposures may affect veterans' health. In many instances, there is little information available regarding the link between exposures during deployment and health effects. This is because there is not enough information about the actual levels of veterans' exposures as well as limited research that links specific exposures with negative health effects.

Fortunately, more and more research is being conducted to look at the potential for health effects from deployment-related exposures in the veteran population. For a concerned veteran, assessing his/her individual exposure history is an important first step. At the WRIISC, clinicians with expertise in environmental and occupational health take a detailed exposure history that assesses what a veteran was exposed to - how much of it and for how long. This assessment includes exposures during military and non-military job assignments. We also take into consideration other factors which are important in determining health outcomes including personal health history for pre-existing medical conditions that may be aggravated by deployment-related exposures. We share relevant research and talk about what is known and not known in an attempt to address an individual's health concerns. This section of the newsletter focuses on exposure concerns which we often get asked about because of current news stories and research studies. We want to let you know what we know.

Solid Waste Burning (Trash and Feces Fires)

The proper disposal of waste during deployment is essential to prevent health problems and protect service members. In certain situations, when sanitary and waste management facilities are not available, this waste may be burned in an open pit. Low temperature burning

and smoldering conditions in an open pit allow for the formation of air pollutants including particulates of smoke and other aerosolized materials based on the nature of what is burned (e.g., plastic, paper, feces).

Health effects from burning waste smoke depend on several factors including the nature of the waste burned. It is unlikely that we will ever know precise components of a specific trash smoke exposure since each trash burn is different, i.e. sometimes with lots of plastics from MREs, sometimes mostly paper, sometimes with animal and/or human feces or remains etc. Also important to determining health effects are: the length of time an individual was exposed, how close to the burning smoke an individual was and whether or not any protective measures were used. The potential for exposure is highest for service members who are actually burning the waste in comparison to those who may be in the general vicinity of the smoke, because the concentration of the pollutants at the source and the length of exposure tends to be greater.

There are many irritants that are released into the smoke plume from burning of trash/waste/feces which may cause short term symptoms such as nausea and/or irritation of the eyes, respiratory tract and other mucous membranes causing symptoms including headaches, burning eyes, nose and throat and cough. For otherwise healthy service members who do not have a prior lung or heart condition, symptoms tend to resolve quickly after an exposure ends. Individuals who have pre-existing lung diseases such as asthma or chronic obstructive pulmonary disease may experience a worsening of their medical condition from the irritation of the lungs by the air pollution.

While it is possible that some components of the smoke may contain toxins and/or cancer causing chemicals, given the limited duration and intermittent nature of most soldiers' exposures to smoke from the burning trash/waste, it is unlikely that the majority of veterans exposed will suffer any long-term health effects such as lung disease or cancer from the burning of trash and solid wastes.

A 2007 study by the U.S. Army Center for Health Promotion and Preventive Medicine and the U.S. Air Force Institute for Operational Health that tested air quality near a burn pit at Balad Air Base, Iraq, concluded that "exposure levels from burn pit operations are not routinely

Deployment related exposure assessments are conducted as part of a NJ WRIISC comprehensive medical evaluation. The NJ WRIISC also has a special service where veterans enrolled in any VA across the country can call to make an appointment to discuss exposure concerns during a phone call with a WRIISC physician who has expertise in environmental and occupational health. If you are interested in this telephonic exposure consultation, please contact us at 1-800-248-8005.

above" deployment health guidelines and concluded that "adverse health risks are unlikely." While the study says long-term adverse health effects from the burn pit are "unlikely," there is also evidence from other studies that some U.S. troops are returning from Iraq with lung diseases, allergies and other problems. A study of more than 6,000 Iraq war veterans by researchers at a Department of Veterans Affairs medical center in New York found that about 10 percent of returning troops suffered from nasal allergies, a rate roughly twice that of troops stationed in the United States. So while long term health effects are unlikely, some short term health concerns are possible.

We recommend that you talk to your physician if you are concerned that you have persistent symptoms or health effects from exposure to solid waste burning during your deployment.

Dust, Sand and Other Airborne Particles

Many service members have health concerns about dust, sand, and other airborne particle exposures. Airborne particles may include dust, sand, dirt, soot, smoke, and liquid droplets. Particles can be suspended in the air for long periods of time. Service members deployed to the Persian Gulf, or other dusty environments, are often exposed to dust and sand particles. Southwest Asia is known to have some of the highest airborne particulate matter in the world.

In addition to blowing sand and dust, particles may come from a variety of sources including vehicle exhaust, factories, construction sites, farming, unpaved roads, and burning debris. These airborne particles can enter the body when you breathe. Large particles can be trapped in your nose and throat and are removed when you cough or sneeze. Particles small enough to be inhaled into the deepest parts of the lungs are of greatest concern. Recent evidence indicates that fine particulate matter, known as PM2.5, (about 2.5 microns in diameter), may be the greatest health hazard.

Exposure to high levels of particulate matter can cause irritation of the nose and respiratory tract-causing coughing, sneezing and sometimes sinus pressure/irritation. These symptoms tend to resolve within a few days/weeks after the exposure ceases. People with allergies, asthma, or other breathing conditions may have more severe symptoms. Based on the best available medical research to date, there are no studies indicating any significant adverse health effects to veterans deployed to Middle Eastern countries from exposures to sand/dust storms. Importantly, there are no studies of service members from the Gulf War indicating an increase in lung problems except for those with pre-existing conditions, such as asthma, emphysema, and allergies. In the absence of evidence of acute deep lung exposure (which would have resulted in activity limitations, shortness of breath or required medical treatment including oxygen), the majority of service members are not likely to develop long-term health effects from their exposures to sand and dust storms during their deployment to the Persian Gulf.

If you are concerned that you have persistent symptoms or health

effects from particulate matter exposure during your deployment, we recommend that you discuss this with your physician.

Depleted Uranium

Some service members who return from deployment have health questions about Depleted Uranium (DU). Uranium is a heavy metal that occurs naturally in the earth's crust and is found in air, water, soil and food. DU is what is left over after the uranium is processed. As a result, DU is a weakly radioactive substance with 40% less radioactive than natural uranium.

Because of its density, low cost, and ability to protect service men and women, DU is used by the U.S. military to make armor on tanks and other military supplies stronger. The first time DU was used by the US on a large scale was during the Persian Gulf War in the early 1990's. DU that remains outside the body is not a health concern. Just being in the area of tanks or supplies made with DU will not result in DU exposure. Service members who were in close vicinity to fires or explosions that involve DU munitions or supplies may be at risk for DU exposure if they inhaled or ingested some of the DU fragments or if they sustained a shrapnel injury as a result of the explosion.

If DU enters the body, it may remain in the body. Studies on people with very high exposures to DU over a long period of time (uranium miners and processors) have shown that the main health effect of high doses of depleted uranium is on the kidneys. Since 1991, the VA has tracked the health of Gulf War veterans who were involved in friendly fire incidents involving DU munitions. There are ongoing studies of Veterans of Operation Desert Storm who have DU shrapnel inside their bodies (highest level of exposure) and veterans who had no exposure to DU. After 16 years of follow up, the DU shrapnel group has not had any health problems that can be linked to the DU, including cancer, birth defects and kidney problems, even though their measures of uranium on a urine test are elevated, as expected. There were a few minor differences between those with high and low DU levels, but they were not consistent from year to year. These differences were not big enough to impact the person's daily life.

A 2007 study by the institute of Medicine (IOM) included a review of over 1,000 recent research studies which examined exposure to DU and health effects (i.e. different types of cancer such as renal cancer and non-malignant diseases such as neurological problems). The IOM report concluded that a large or frequent health effect is unlikely from exposure to DU. The report also emphasized that there is not enough research to state for sure that a particular health outcome can never occur.

If you are concerned about DU exposure, it is important that you talk to your primary care provider. He or she can look at the type and length of your potential exposure to DU and the chance that you may still have DU in your body. You can work as a team to see if any further follow-up testing is indicated.

If you have *any* concerns about deployment-related exposure or wonder if you are experiencing any symptoms, it is important that you speak to your health care provider about treatment and management strategies in order to optimize your health and maintain a good quality of life.

WRIISC
NEW JERSEY
Experts in Post Deployment Health

The New Jersey War Related Illness and Injury Study Center
New Jersey Health Care System
Department of Veterans Affairs (VA)
385 Tremont Ave., Mailstop 129
East Orange, NJ 07018
1-800-248-8005
www.warrelatedillness.va.gov

We are *experts in post-deployment health.*

For more information, call: 1-800-248-8005
or visit: www.warrelatedillness.va.gov